PHYSICIAN COMPENSATION
IN THE
FEDERAL REPUBLIC OF GERMANY

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THE HEALTH CARE AND HEALTH INSURANCE SYSTEM OF THE FEDERAL REPUBLIC OF GERMANY

1. The Health Care and Health Insurance System of the Federal Republic of Germany

1.1 The Current Health Situation

The purpose of the health care and health insurance system is to improve the health status of the population. In order to understand the system fully, one first has to look at the current health situation of the nation.

The population of the Federal Republic was estimated to be 61.5 million in 1980.[1] Recent projections indicate that the population will decline to 56 to 58 million by the end of the century.[2] This long term decrease is due to a low fertility rate: The net reproduction rate is at .65 presently and we expect no major changes in the near future. Therefore, the percentage of people of 60 years of age and over of the total population is to increase further although it is already high today: In 1980, 20.1 percent of the total population was 60 years of age and over; in the year 2000 we expect their share to be approx. 23 percent. Utilization of health services of this age group is 2 to 3 times the utilization of a middle aged group. The high and still increasing share puts, therefore, a heavy burden on the health care system and dominates more and more the health situation.

The large share of the older population is, as mentioned, in part due to the present low fertility rate. The deeper reason is, however, the tremendous increase in life expectancy since the turn of the centuries (table I). Female life expectancy at birth increased from 48.3 years in 1901/10 to 75.6 years in 1976/78, male life expectancy

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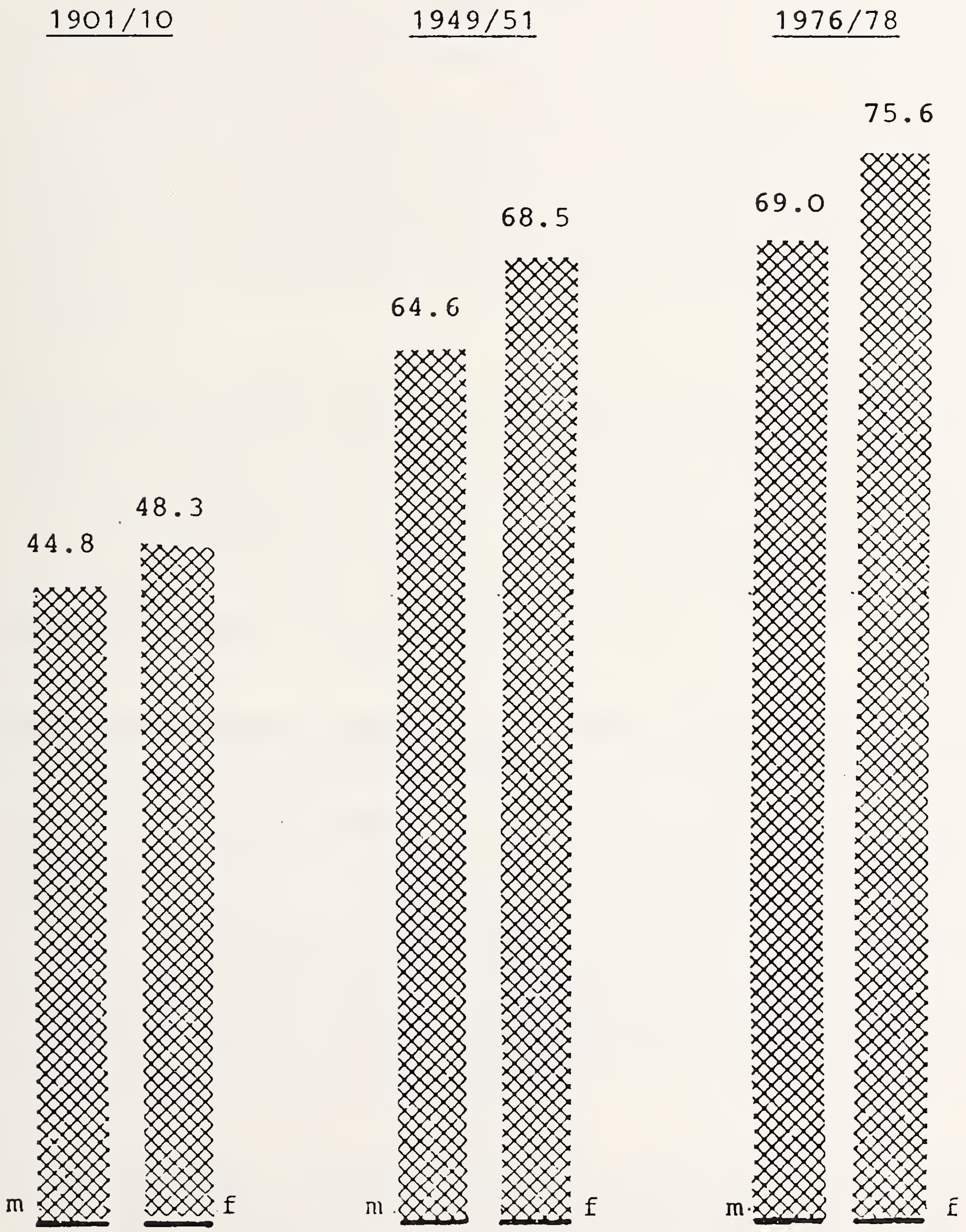
[1] thereof Germans: 56.8 million

[2] thereof Germans: 52 to 53 million

Table I

LIFE EXPECTANCIES

- Fed. Republic of Germany -



from 44.8 to 69.0. Presently a female aged 70 still has a life expectancy of 12.5 years, a male aged 70 one of 9.7 years.

This unprecedented success was mainly due to the successfull control of many fatal infective diseases such as tuberculosis, typhoid and paratyphoid fever, pneumonia, poliomyelitis etc. The mortality rate for infective and parasitic diseases including pneumonia (ICD 000-136, 480-486) declined to 32.6 per 100,000 population, or 2.6 % of total mortality, in 1978 1).The only major exception, although not fatal, are the upper respiratory infections. Also perinatal and infant mortality decreased markedly. The chance of a live born child to reach the age of one increased from 80 % in 1901/10 to 98 % in 1976/1978 for males and from 83 % to 99 % for females.

Of course, these achievements were only to a limited extent due to better acute medical services. Better nutrition, housing, education, hygiene and social welfare were the key to solving the German health problems of the 19th century. And public health services played an important role in bringing these changes about.

In consequence, chronic conditions and accidents dominate todays health problems. Diseases of the circulatory system account for 46 percent of the total mortality, neoplasms for 22 percent, accidents and violence for 6 percent and diabetes for 2.3 % (tableII). Of the diseases which bother today's population a lot and are costly to treat but which usually are not fatal, arthritis and rheumatism, dental diseases, mental health problems and diseases of the ear and eye take the first places.

Many of these chronic conditions are due to the higher life expectancy. But they are not destiny, but largely due

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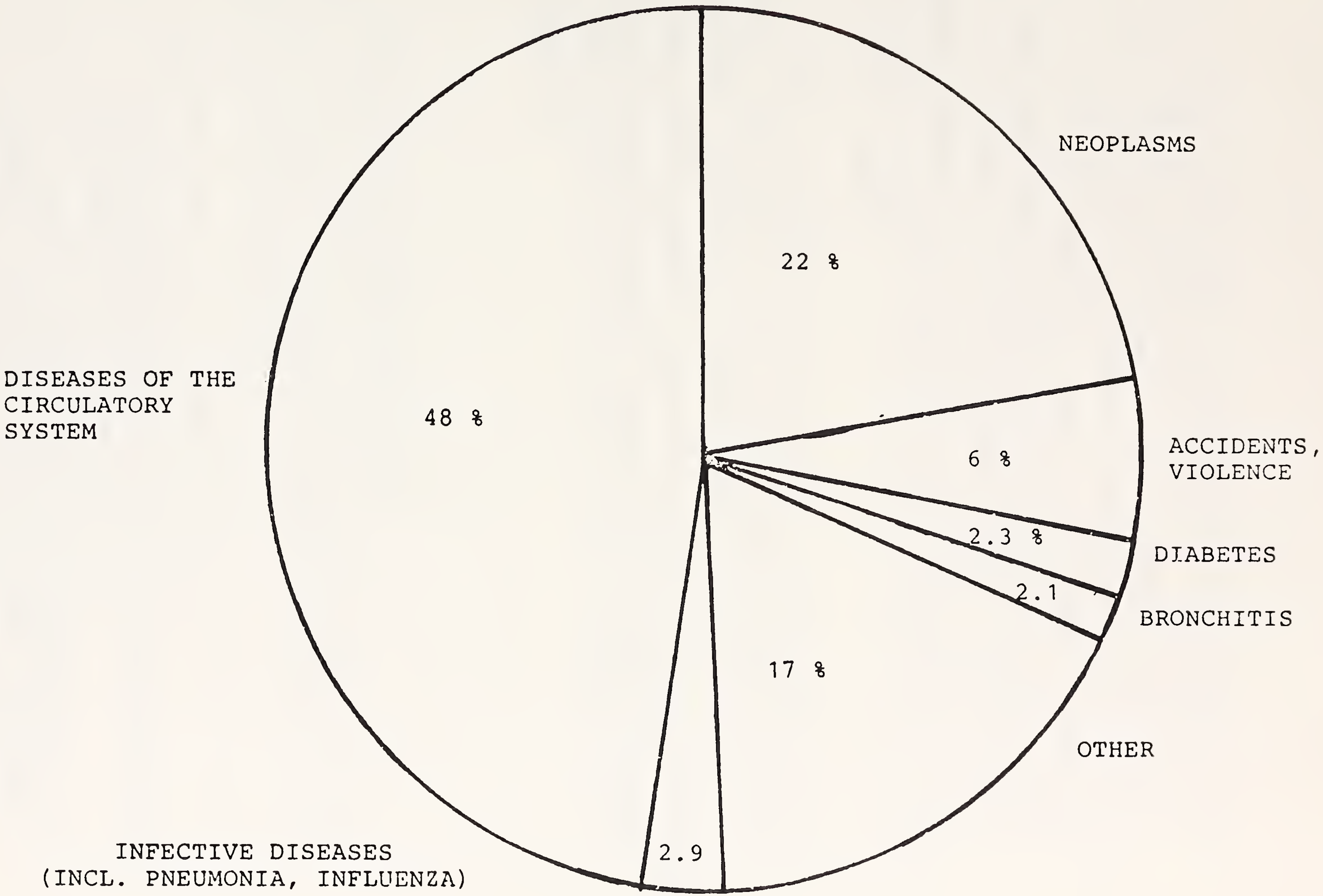
1) excluding influenza, which accounted for 2.1 deaths per 100,000 population in 1978

ble II

MORTALITY BY CAUSES

Fed. Republic of Germany, 1978



to our modern life style, in particular due to malnutrition (overnutrition), alcohol abuse, smoking, lack of physical exercise, overweight, stress, family problems and lack of social integration, problems at work etc., but also pollution, noise and traffic problems. With these causes of diseases and mortality better under control, life expectancy could be ten or twenty years more. For instance, mortality of diabetis increased in the Federal Republic from 1.1 % in 1952 to 2.3 % in 1978, quite clearly a consequence of changed nutritional habits.

It is widely accepted that the key to solving todays health problems again lies in the change of social and individual conditions. Medicine can effect only limited success in the fight against today's prevalent health problems. Prevention, both individual and social, seems to be the key, although our achievements on these lines so far are by no means satisfactory.

1.2 The Health Care Delivery System

In the Federal Republic of Germany, health care delivery is in the hands of a variety of private, charitable and public health care providers:

a) ambulatory medical and dental services:

- office based physicians, both GPs and specialists, and dentists, all generally solo
- to a minor extent: out-patient-departments of teaching hospitals, chief hospital physician priviledge to conduct also ambulatory practice, some contracted hospital services (f.i. special diagnostic procedures, psychiatric services etc.), some factory based clinics run by some major companies

b) other ambulatory services:

- nurses and domestic helps of communities or charitable institutions (f.i. "Sozialstationen")
- office based paramedical health care providers, f.i. physiotherapists of various types, psychotherapists, opticians, pharmacists, dental technicians
- public and private spa services
- public and private ambulance services

c) hospital services (in-patient):

- private, charitable (non-profit) and public hospitals and nursing homes
- to a minor extent: staff priviledges of office based physicians

d) public health services:

- Federal and State Departments of Health and Social Affairs
- Federal Office of Health (Bundesgesundheitsamt), Berlin
- Federal Center for Health Information, Cologne; German Institute for Medical Documentation and Information, Cologne; Federal Office for Sera and Vaccines (Paul-Ehrlich-Institut), Frankfurt
- public health offices at county level ("Gesundheitsamt")
- social medical and control physician services of social security

e) safety and prevention at work:

- factory based physicians employed by companies or contracted services of statutory industrial accident insurance et.al.

f) medical and occupational rehabilitation:
  - charitable, public and social security institutions.

There are planning systems for ambulatory medical and dental services, administered jointly by the health insurance funds and H.I. physicians' associations, and for hospital services administered by the Federal States. All other sectors are supposed to be more or less "demand led".

An overview of the pricing mechanisms for the respective services is presented in table 1.

1.3. Data on Health Care Resources

According to a study of the Research Institute of the Local Health Insurance Funds, in 1976 approximately 1.7 million people were employed in the German health care system including pharmaceutical industry and health related parts of social security. That was 6.7 % of the total labor force of the Federal Republic of Germany or as much as agriculture and fishing. Thereof, approximately 0.5 million or less than 3o % were certified health professionals. Data on this fraction of the health community is presented in tables 2 to 4.

The total number of active physicians was approx. 135,ooo in 1979, or 22.1 per 1o,ooo population.

The capacities of medical schools were estimated to be at 11,1oo new medical students per year.

Table 1 Pricing mechanism of the German health care system

medical service	pricing mechanism	parties involved
hospital care	per diems, fixed by Federal States, covering "approved" operating costs; voluntary negotiations of hospitals and h.i. funds in advance; if they come to terms, the States authorize the result	Federal States hospitals, h.i. funds
ambulatory medical and dental services	a) *statutory health insurance:* fee-for-service; fee-schedule negotiated between h.i. funds ass. and h.i. doctors association at Federal level; mark up negotiated at State level b) *private health insurance:* "market pricing" within margins of official fee-schedule	associations of h.i. funds and of h.i. physicians physician (patient)
pharmaceuticals	a) price of producer: "market pricing" b) mark up of dealer: fixed by the Federal Government c) mark up of pharmacies: fixed by the Federal Government	producer (physician) (patient) Federal Government Federal Government
public health services	no pricing mechanism	

The required minimum length of medical training is 6 years, but most students don't apply for the final examinations before 6.5 years of studies. The required minimum consists of two years of theoretical studies, three years of combined theoretical and clinical studies, and one year of practical training in a teaching hospital. After final examinations the students can immediately apply for the "approbation" (licence) issued by the Federal States and granting the right to practice as an physician independently. The above presented number of active physicians include all active physicians with "approbation".

After the approbation, the physician can choose to undergo further training for specialization, which will last 5 years, on average, and is offered by most hospitals. Alternatively, he can work in a hospital or in ambulatory care as General Practitioner (physician without specialization). Since some years, there is also a training for specialization in general medicine being offered ("Facharzt für Allgemeinmedizin"), which only few physicians choose, however.

With respect to active physicians, there are three major trends:

1) a strong increase of the total supply of physicians (of 2-3% per year) in past and future
2) a strong tendency towards specialization (in ambulatory care quite clear cut, in hospitals overshadowed by the more rapid increase of physicians in training for specialization, who are not yet counted as specialists)
3) a strong tendency towards hospitals (somewhat checked only in recent years)

Table 2 : Selected Data on Health Care Resources

- Federal Republic of Germany -

Type of resources		1960	1970	1978	1979
Human Resources					
- physicians		79,350	99,654	130,033	135,711
- dentists		32,509	31,175	32,482	32,958
- pharmacists		15,776	20,866	27,480	27,889
- certified nurses		-	139,944	200,340	208,966
- total certified health personnel		-	369,640	529,155	542,220
- total employed in health care		-	-	1,710,000 1)	.
- total employed in hospitals			547,283	722,003	742,261
Capital Resources					
- hospitals	acute	2,441	2,364	2,120	2,053
	psychiatric, long stay etc.	1,163	1,223	1,208	1,233
	total	3,604	3,587	3,328	3,286
- hospital beds	acute	457,004	475,555	484,776	478,888
	psychiatric, long stay etc.	126,509	207,699	230,103	233,167
	total	583,513	683,254	714,879	712,055
Population		55.785 Mio	61.001 Mio	61.322 Mio	61.359 Mio

1) 1976 (WIdO)

Source: Fed.Dep.of Youth,Family and Health, Data of the Health Care System, Edition 1980, Bonn 1980

Ferderal Bureau of Statistics, annual reports on certified health personnel and hospitals

Table 3 : Physicians in Germany in Past and Future (active physicians)

Year	Physicians				Population per physician
	total	hospitals	office-based	others	
1876	13,728	344	12,049	1,335	3,125
1909	30,558	3,086	25,689	1,783	2,080
1939	54,389	14,780	33,323	6,286	1,450
Fed.Repub.					
1960	79,350	22,646	49,225	7,479	703
1970	99,654	38,655	50,731	10,268	609
1978	130,033	59,183	59,036	11,814	472
1979	135,711	62,827	60,512	12,372	453
Projection of WIdO					
1990	190,000	-	-	-	307
2000	250,000	-	-	-	217

Sources:
1) Gesellschaft für Sozialen Fortschritt (Hrsg.): Der Wandel der Stellung des Arztes im Einkommensgefüge, Berlin 1974, p.16
2) Wiss.Institut der Ortskrankenkassen: Das Ärzteangebot bis zum Jahr 2000, Bonn 1978, p.40 f.
3) Federal Bureau of Statistics: Fachserie 12 (Gesundheitswesen), Reihe 5: Berufe des Gesundheitswesens

Graph 1

PHYSICIANS IN GERMANY IN PAST AND FUTURE

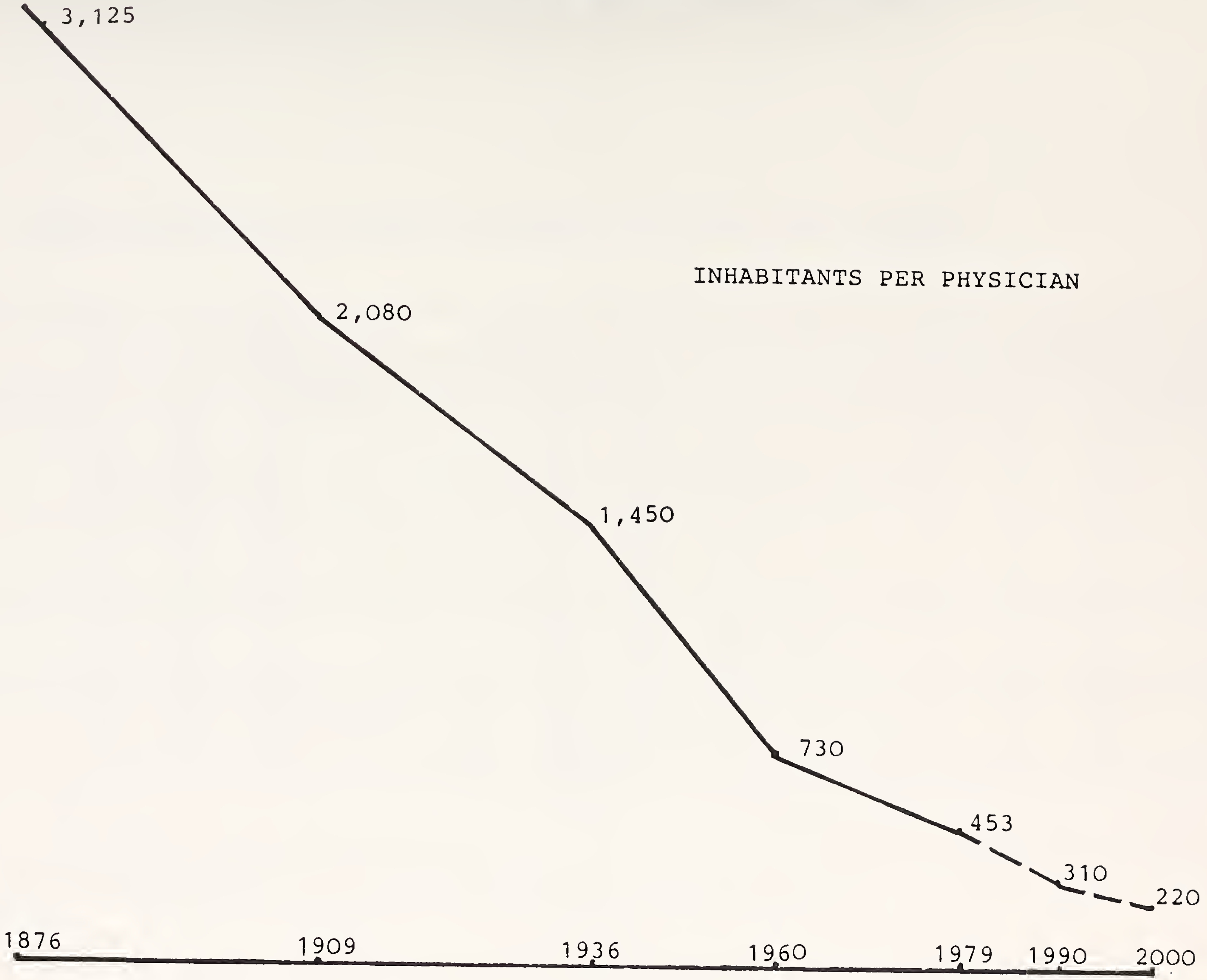


Table 4 :

Active Physicians by Type of Practice, Specialization and Sex

type of practice	1960			1970			1979			1980		
	total	Speci	GP and other[1]	total	Speci	GP and other[1]	total	speci	GP and other[1]	total	speci	GP and other[1]
hospitals	22,646	10,858	11,788	38,655	15,717	22,938	62,827	25,539	37,288			
office based	49,225	19,200	30,025	50,731	22,740	27,991	60,512	32,782	27,730			
others	7,479	2,344	5,135	10,268	3,276	6,992	12,372	4,374	7,998			
female	11,346	·	·	23,306	8,210	15,090	28,655	11,177	17,478			
total	79,390	34,402	46,948	99,654	41,733	57,921	135,711	62,695	73,016	139.431		

[1] certified GPs, physicians in training for speciality and physicians without specialization

Source: Federal Bureau of Statistics: Berufe des Gesundheitswesens (annual reports)

In ambulatory medical care, most physicians operate single-handed.Group practice is not encouraged by the Chambers and Physicians Associations. But many office based physicians take part in lab cooperatives (Laborgemeinschaften). Any office based physician may take part in the service of H.I. patients and about 95 % do so. For that purpose, they have to join the H.I. physicians' associations and to prove two years of medical experience.

Only a very little share of the physician increase went into understaffed public health, psychiatric services and underdoctored regions. The reason is the little prestige and income, and the little attractiveness of regions, respectively.

Data on health care facilities are available only to a very limited extend (s. table 2).

1.4. Financing

Funds for financing health care come from a variety of sources. According to a study of the Federal Bureau of Statistics, in 1978, total funds amounted to 165.2 billion DM, of which 117.8 billion DM went into health services and 47.4 billion DM into cash benefits (wage-continuation payments by employers, sickness cash benefits, invalidity pensions etc).

These funds came from (in %):

	services	cash	total
public funds	14.9	9.6	13.4
soc. sec.	62.8	38.2	55.8
- h.i.	57.3	12.8	44.5
private h.i.	5.4	2.2	4.5
employers	5.2	5o.1	18.1
private households	11.7	-	8.3
total	1oo	1oo	1oo

A detailed matrix of the flow of funds in 1978 is presented in table 5. For better understanding, a few explainations seem in order:

Graph 2

SOURCES OF FUNDS OF HEALTH CARE

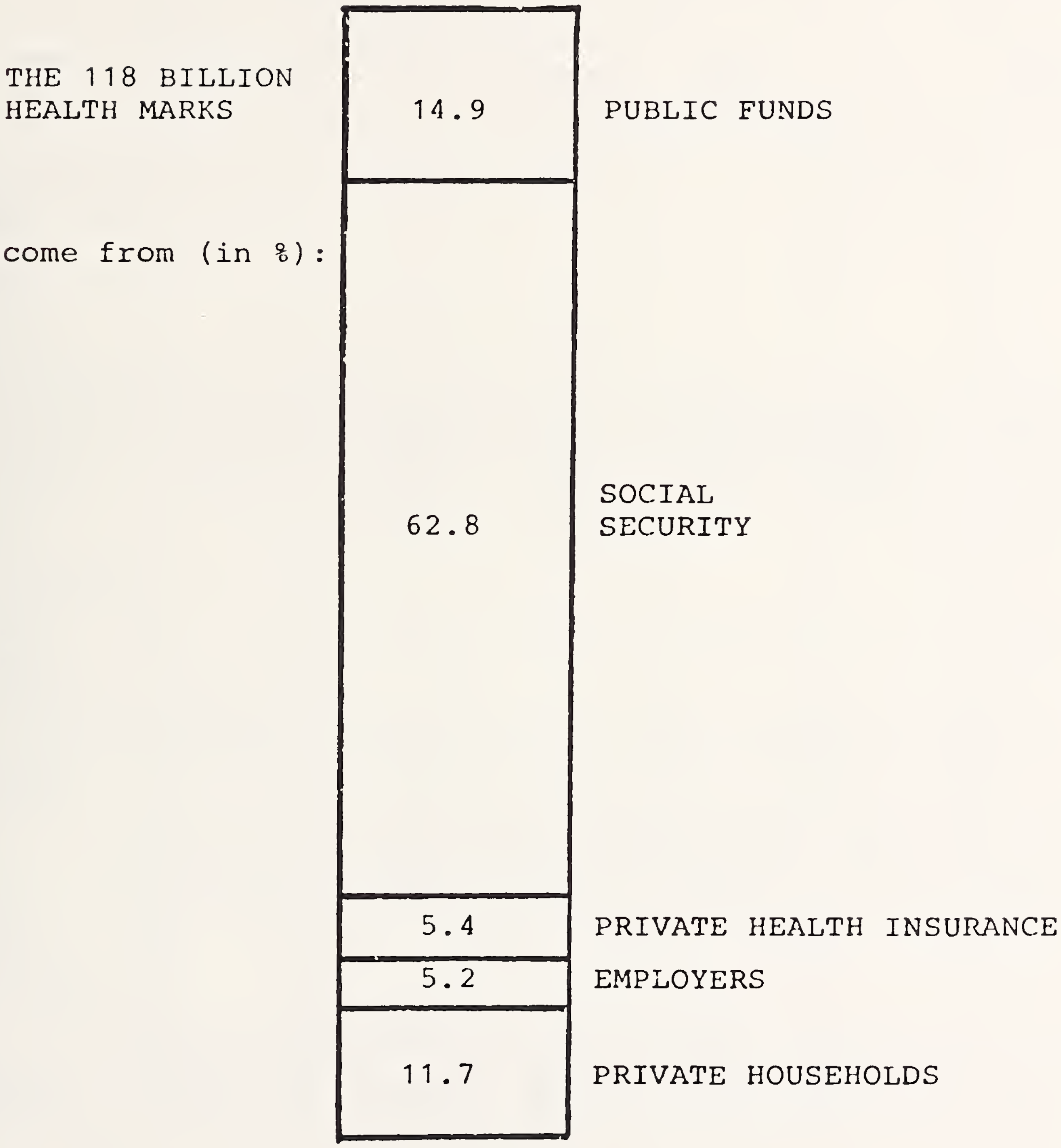


Table 5

Sources of Funds in the Health Care System, 1978

Federal Republic of Germany, mio DM							
Type of Service	public funds	social security		Private Health Insurance	Employers	Private House-holds	Total
		Total	Health Insurance				
1. Prevention and Care	5,907	2,676	2,148	2	1,600	-	10,184
1.1 Public and work health	1,474	456	224	-	1,600	-	3,530
1.2 preventive services	113	1,139	843	-	-	-	1,252
1.3 maternity	37	1,081	1,081	2	-	-	1,120
1.4 nursing care	4,283	•	•	-	-	-	4,283
2. Curative Services	9,311	66,302	61,865	4,655	4,512	13,775	98,555
2.1 ambulatory	1,214	24,683	24,142	1,730	1,733	6,379	35,739
2.2 in-patient	5,774	23,700	22,932	2,162	1,685	482	33,803
2.3 in-patient in spas	72	2,985	215	-	384	1,780	5,221
2.4 drugs, medicinal aids, auxiliary services	174	14,576	14,576	763	710	5,134	21,357
2.5 rehabilitation (occupational and social)	2,077	358	-	-	-	-	2,435
3. Training and Research	2,309	-	-	-	-	-	2,309
4. Not Attributable Expenditure	31	5,040	3,467	1,659	9	-	6,739
TOTAL SERVICES	17,558	74,017	67,479	6,316	6,121	13,775	117,787
Income Transfers (wage continuation payments, sickness cash benefits, invalidity pensions)	4,549	18,093	6,071	1,033	23,749	-	47,424
TOTAL EXPENDITURE	22,107	92,110	73,550	7,349	29,870	13,775	165,211

Source: Computations based on: Federal Bureau of Statistics, Ausgaben für Gesundheit ....., 1980.

Remarks: "Employers" includes special benefits for civil servants (Beihilfe).
2.1 includes dentures.
4. includes home helps.

Table 6:

Hospital Utilization Data

Federal Republic of Germany, 1970 - 1979

year	Hospital admissions	Hospital days	average length of stay	occupancy rate in %
	per 10,000 population			
1970	1,461	36,410	24.9	88.5
1975	1,621	35,978	22.2	83.3
1978	1,761	35,765	20.3	84.1
1979	1,777	35,754	20.1	84.5
thereof				
- acute	1,552	23,665	15.2	83.2
- long stay and psychiatric	225	12,090	53.7	87.3

Source: Federal Bureau of Statistics, Annual Reports on Hospitals

"Public Funds" cover certain types of services (f.i. public health, training and research, occupational and social rehabilitation), of expenditures (f.i. hospital capital expenditure), of people (f.i. victims of war, supplementary social benefit system for those in need) and of deficits (f.i. deficits of public hospitals).

Of "Social Security", health insurance is of course the most important branch, but old age pension insurance and work accident insurance, too, provide health related benefits both in kind and in cash.

"Employers" cover certain general services (f.i. safety and prevention at work) and cash benefits (f.i. wage-continuation payments up to six weeks) as well as cover totally or in part the health care of defined groups (civil servants, army, police, covered by public employers).

1.5. Utilization of the Health Care System

Data on the utilization of the hospital sector is presented in table 6. Data on the utilization of ambulatory services is presented further down.

1.6. The Health Insurance System

Approximately 9o % of the population is covered by statutory health insurance. Membership for blue collar and most white collar employees, farmers, pensioners and students is compulsory, for many others optional.

7 %, mostly self employed and civil servants, are covered by private health insurance; the rest is covered by special schemes. Less than .3 % are not covered at all.

Statutory health insurance covers virtually all health services including maternity and preventive services but excluding public health, work safety and prevention, nursing at home and in homes and social and occupational rehabilitation. The services are delivered in kind on the basis of contracts with the respective providers. All qualified providers are free to serve H.I.-patients and most do so. Co-payments of the patients are due only for dentures and DM 1,5o per item of prescription. The patient has "free choice" between providers, in particular free access to GP's and specialists in ambulatory care. The contacted physician, in turn, is free to refer the patient to any other GP, specialist or hospital if considered necessary.

In addition, the funds provide sickness cash payments from the seventh week of sickness on (after termination of employers' wage continuation payments).

An overview of the expenditure structure of the funds is presented in table 9.

The funds are financed by contributions fixed as a percentage of gross income (virtually earmarked payroll taxes) and evenly shared by employers and employees. The contribution rates vary from fund to fund considerably, but stand presently at 12.o % of gross income, on average. Family members and pensioners are insured free of charge (charges for pensioners pending).

Statutory health insurance is administered by some thousand independent funds (bodies of public law) grouping into 6 branches. The Local Health Insurance Funds (Ortskrankenkassen) are the largest and cover about 4o % of the total population. Blue collar employees, farmers and pensioners are assigned to particular funds by law, all others have options between funds bringing competition for membership into the statutory system.

1.7. Cost Developments

Following a period of tremendous cost expansion (GNP share up from 6.4 % to 9.4 % within five years), the second half of the seventies witnessed a period of almost ideal financial stability (see tables 7 to 1o), due to a comprehensive public debate, self restraint and cost containment legislation. In 198o, however, cost expansion again gained momentum; the number of providers had never stopped to grow and now asked it's price. After a series of new efforts of self restraint of limited success ("Bayern-Vertrag", Bundesempfehlungsvereinbarung Ärzte etc), the Federal Government introduced amendments to the Hospital Financing Act of 1972 which are still under consideration. Parallel cost containment proposals for statutory health insurance reached the statute book by end of December, 1981. The main points are: slightly higher co-payments of patients for drugs, medicinal aids, dentures and costs of transportation, decrease and/or freeze of prices for medicinal aids and dental technicians, exclusion of drugs for minor illnesses and prolonged intervals between spa treatments. Thirdly, the Federal Government introduced proposals for reform of the official fee schedule which would restrict the freedom of physicians and dentists to determine prices for pri-

table 7: Total Health Expenditure, Federal Republic, 1970 - 1978$^{1)}$

type of expenditure	1970	1971	1972	1973	1974	1975	1976	1977	1978
				Mio DM					
preventive services, public health$^{2)}$	3 581	4 427	5 171	6 057	7 476	8 469	9 045	9 666	10 201
curative medical and dental services	35 208	42 882	49 314	58 635	68 742	78 584	84 852	89 534	96 120
income transfers, social rehabilitation	27 522	29 724	34 710	37 814	40 280	42 299	44 124	47 321	50 028
education and research	955	1 158	1 328	1 540	1 824	1 985	2 028	2 198	2 309
not attributable expenditure	3 071	3 522	3 956	4 686	5 326	5 904	6 240	6 566	6 553
total	70 337	81 713	94 479	108 732	123 648	137 241	146 289	155 285	165 211
				percent					
preventive services, public health$^{2)}$	5,1	5,4	5,5	5,6	6,0	6,2	6,2	6,2	6,2
curative medical and dental services	50,0	52,5	52,2	53,9	55,6	57,3	58,0	57,7	58,1
income transfers, social rehabilitation	39,1	36,4	36,7	34,8	32,6	30,8	30,1	30,5	30,3
education and research	1,4	1,4	1,4	1,4	1,5	1,4	1,4	1,4	1,4
not attributalbe expenditure	4,4	4,3	4,2	4,3	4,3	4,3	4,3	4,2	4,0
total	100	100	100	100	100	100	100	100	100
				1970 - 100					
preventive services, public health$^{2)}$	100	124	144	169	209	236	253	270	285
curative medical and dental services	100	122	140	167	195	223	241	254	273
income transfers, social rehabilitation	100	108	126	137	146	154	160	172	182
education and research	100	121	139	161	191	208	212	230	242
not attributable expenditure	100	115	129	153	173	192	203	214	213
total	100	116	134	155	176	195	208	221	235

1) total expenditure, including cash sickness benefits and invalidity pensions (income transfers) (for national health expenditure excluding income transfers see next table!)

2) including maternity services and care for the old and disabled

Source: Statistisches Bundesamt (Federal Office of Statistics): Ausgaben für Gesundheit 1970 - 1978, in: Wirtschaft und Statik 9/1980, pp. 593-603

Table 8 : National Health and Health Insurance Expenditure

- Federal Rupublic of Germany -

year	Health Insurance Expenditure[a]		National Health Expenditure[b]	
	billion DM	% of GNP	billion DM	% of GNP
1950	2.278	2.3		
1955	4.627	2.6		
1960	9.513	3.1		
1965	15.785	3.4		
1969	23.896	3.9		
1970[c]	25.179[c]	3.7[c]	43.31	6.4
1971	31.140	4.1	52.70	7.0
1972	36.401	4.4	60.67	7.3
1973	43.365	4.6	72.12	7.8
1974	51.809	5.2	84.97	8.6
1975	60.990	5.9	96.82	9.4
1976	66.563	5.9	104.36	9.3
1977	69.823	5.8	110.38	9.2
1978	74.788	5.8	117.79	9.1
1979	80.722	5.7	.	.
1980	89.528	6.0	.	(9.3)

7/81

[a] Source: Federal Department of Labour and Social Affairs; figures include cash benefits which presently amount to about 7 % of total expenditure!

[b] Source: Federal Office of Statistics, "Wirtschaft und Statistik" 9/1980, pages 593 - 603 (cited figures do not include cash benefits).

c) First year of employers' payments of wages during sickness to blue collar workers (up to six weeks).

[d] Preliminary.

Table 9:

Expenditure of Statutory Health Insurance

- Federal Republic of Germany -

Item	Expenditure (million DM)								
	1960	1965	1970	1975	1976	1977	1978	1979	1980[a]
Ambulatory medical services	1874	3195	5458	11,259	11,923	12,488	13,194	14,164	15,360
Dental services and dentures	736	1354	2536	8,310	9,609	10,011	10,722	11,622	12,854
Drugs	1093	2021	4224	8,901	9,642	9,849	10,651	11,378	12,563
Medicinal aids	212	372	667	2,582	3,053	3,339	3,844	4,291	4,810
Hospital services	1568	2947	6009	17,534	19,256	20,464	21,865	23,151	25,345
Sickness payments[b]	2688	3698	2467[b]	4,664	4,733	4,909	5,308	5,960	6,673
Preventive medical services	78	147	248	1,059	921	950	978	968	1,076
Maternity benefits[c]	393	680	1101	1,689	1,774	1,771	1,827	1,963	2,834[c]
Other Benefits	322	500	1139	2,172	2,676	2,823	3,206	3,707	4,186
Total Benefits	8965	14,914	23,849	58,170	63,587	66,614	71,460	77,204	85,701
Total without sickness payments	6277	11,216	21,382	53,506	58.854	61,705	66,152	71,244	79,028
Administration etc.	547	871	1330	2,819	2,976	3,209	3,328	3,518	3,827
Total Expenditure	9513	15,785	25,179	60,990	66,563	69,823	74,788	80,722	89,528
GNP	302,300	460,400	685,600	1,030,300	1.125,000	1.200,600	1.293,600	1.404,200	1.497,500

Source: Federal Department of Labour and Social Affairs. Labor and Social Statistics (Series)

[a] Preliminary

[b] Since 1970 employers' payments of wages during sickness also for blue collar workers (up to six weeks) leading to a decrease of insurance sickness payments in 1970 and thereafter.

[c] 1980: first year of 6 monthes-maternity leave after confinement

le 10:

Expenditure of Statutory Health Insurance

- Federal Republic of Germany -

	Average annual rate of increase (%)								Share of total expenditure		
	1960-65	1965-70	1970-75	1976	1977	1978	1979	1980 a)	1960	1975	1980
medical services	11.3	11.4	15.6	5.9	4.7	5.7	7.4	8.4	19.7	18.5	17.2
ices and dentures	13.1	13.8	26.8	15.6	4.2	7.1	8.4	10.6	7.7	13.6	14.4
	13.1	15.9	16.1	8.3	2.1	8.1	6.8	10.4	11.5	14.6	14.0
ids	12.0	12.4	31.1	18.2	9.4	15.1	11.6	12.1	2.2	4.2	5.4
rvices	13.5	15.3	23.9	9.8	6.3	6.8	5.9	9.5	16.5	28.7	28.3
yments b)	6.8	-5.1 b)	13.6	1.5	3.7	8.1	12.8	12.0	28.3	7.6	7.5
medical services	13.3	11.2	33.7	-13.0	3.1	2.9	+1.0	11.2	0.8	1.6	1.2
enefits c)	11.7	10.2	8.9	5.0	-0.2	3.2	7.4	44.4 c)	4.1	2.8	3.2
its	9.1	19.1	13.8	23.2	5.9	13.2	15.6	12.9	3.4	3.6	4.7
its	10.7	10.0	19.5	9.3	4.8	7.3	8.0	11.0	94.2	95.4	95.7
ut sickness payments	12.3	13.8	20.1	10.0	4.8	7.2	7.7	10.9	66.0	87.7	88.3
ion	9.8	8.9	16.2	5.6	7.8	3.7	5.7	8.3	5.8	4.6	4.3
diture	10.7	10.0	19.4	9.1	4.9	7.1	7.9	10.9	100	100	100
	8.8	8.3	8.5	9.1	6.7	7.7	8.5	6.6	-	-	-

7/81

eral Department of Labour and Social Affairs, Labor and Social Statistics (Series)

ary

note b of preceeding table

note c of preceeding table

PHYSICIAN COMPENSATION IN AMBULATORY CARE

2. Physician Compensation in Ambulatory Care

2.1. The Fee-for-Service-System

2.1.1. The System

Ambulatory medical (and dental) services are provided by independent, self-employed, office based physicians, both GP's and specialists, generally single handed. Hospitals and hospital physicians participate only to a very limited extent.

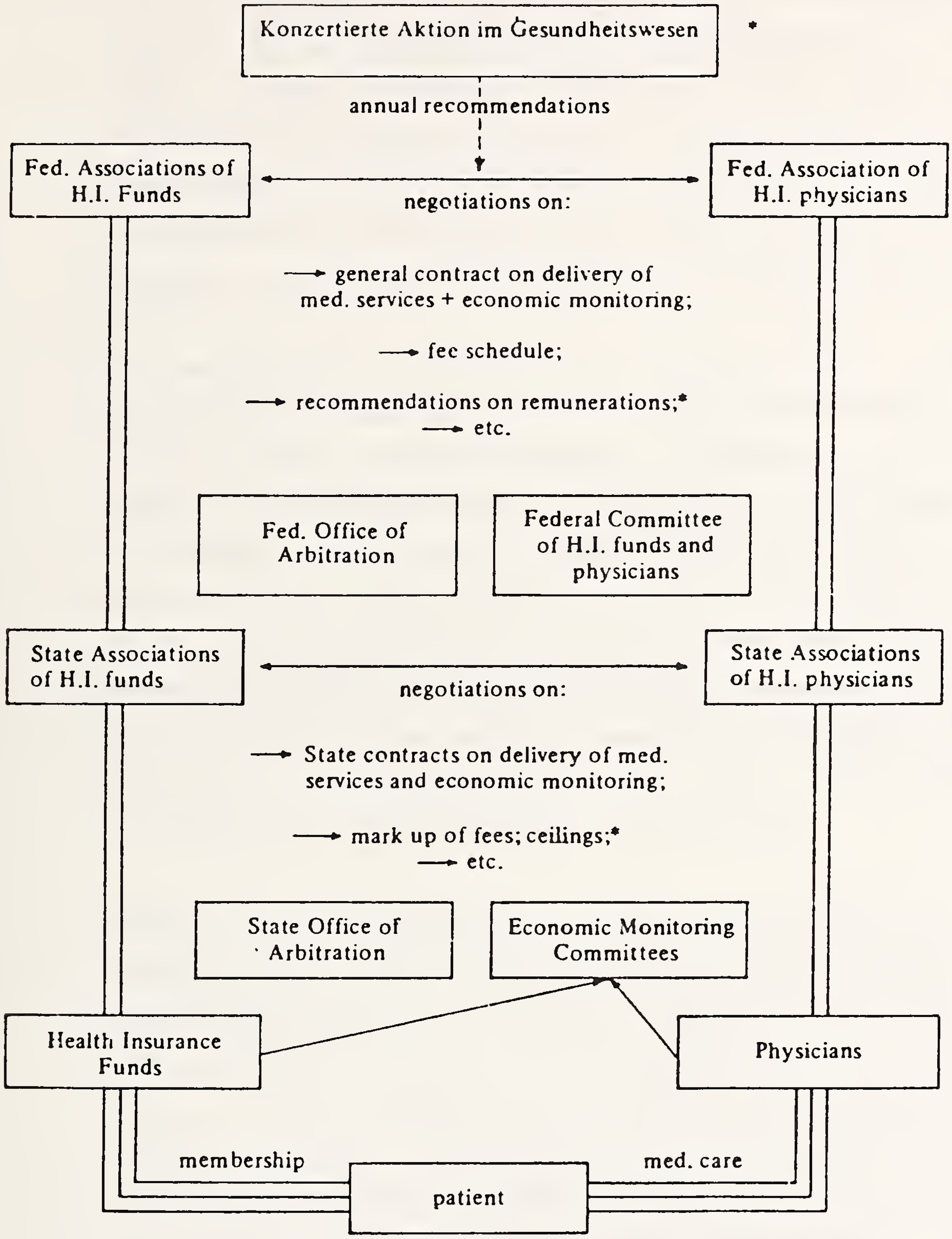
The number and composition of physicians is not restricted (since 196o) and varies between regions considerably, in spite of the "planning system" (which is more or less indicative, with information and economic assistance for young doctors to go into underserved areas, and regional restrictions only as last, not yet applied ressort).

Services are remunerated on a fee-for-service-basis.

With respect to private patients (about 7 % of all patients), the physician is free to charge whatever he deems adequate. The claims have to be specified on the basis of the Official Fee Schedule (Gebührenordnung für Ärzte, GOÄ, von 1965). He should limit the mark up to the sixfold of the fee schedule, but may exceed even that limit.

The fees for statutory health insurance patients are negotiated by the funds and H.I. physicians associations (kassenärztliche Vereinigungen). Fees of funds are estimated to be about half the fees charged to private patients.

Table 11 : Scheme of ambulatory medical care delivery under health insurance



Konzertierte Aktion im Gesundheitswesen *
annual recommendations
Fed. Associations of H.I. Funds
Fed. Association of H.I. physicians
negotiations on:
→ general contract on delivery of med. services + economic monitoring;
→ fee schedule;
→ recommendations on remunerations;*
→ etc.
Fed. Office of Arbitration
Federal Committee of H.I. funds and physicians
State Associations of H.I. funds
State Associations of H.I. physicians
negotiations on:
→ State contracts on delivery of med. services and economic monitoring;
→ mark up of fees; ceilings;*
→ etc.
State Office of Arbitration
Economic Monitoring Committees
Health Insurance Funds
Physicians
membership
med. care
patient

---

* since 1977

Relative values (the fee schedule, Gemeinsamer Bewertungsmaßstab für Ärzte, BMÄ) are negotiated jointly by all funds and H.I. physicians at Federal level, levels of prices (Punktwert) are negotiated separately at State level or, in the case of the substitute funds, at Federal level. Hence, there are (minor) variations of prices between funds and regions, but none with respect to relativities.

The negotiations on fees are only part of a complex negotiations system of the medical care delivery system under statutory health insurance. As in table 11 is indicated, fee contracts are embedded in general contracts on the delivery of medical services and economic monitoring, both at Federal and State level (Bundes- und Landesmantelverträge). These general contracts and their appendices regulate the particulars of the medical services rendered, the principles of remuneration, the fees, the processing of claims and the economic monitoring.

There is no fee-per-case or capitation type of remuneration. Up to the mid-6oties, the funds payed capitations to the H.I. physicians associations, which, in turn, distributed the pool according to a fee schedule. This system was abandoned, however, because the funds wanted a more direct influence on the fee schedule and the monitoring of the claims (see below) and the physicians a clear cut fee-for-service system.

Since the Health Care Cost Containment Act of 1977, most funds include in their contracts "caps" or "ceilings" on the total of remunerations or the utilization per case. In case of excess, fees are lowered accordingly.

The fee schedule applies to all physicians. There are no differences in fees with respect to specialty, age or achievements. Every physician is allowed to render all services and is entitled to the same remuneration as long as he stays within his field of competence. In fact, GP's quite often go into the field of internal medicine, X-ray and lab medicine, pediatrics and gynaecology, as specialists quite often perform outright GP-functions.

Physician services, as defined by the fee schedule, include

- personal physician services (consultations and examinations, home visits, surgery and other diagnostic and therapeutic procedures)
- X-ray, nuclear medicine, lab services and other medical-technical services
- physiotherapy and psychotherapy
- other auxiliary services (dressings, injections etc.)
- screening for the early detection of diseases, maternity services and family planning
- certification of unfitness to work (Arbeitsunfähigkeitsbescheinigung, entitling to wage continuation payments and other cash benefits), prescriptions, referrals etc.

In order to render these services, physicians employ auxiliary staff (certified and non-certified) and/or share in medical-technical cooperatives (Laborgemeinschaften and Praxisgemeinschaften). Physiotherapy and psychotherapy, however, are mostly rendered by independent office based providers acting upon prescriptions or under the supervision of a physician, respectively.

2.1.2. The Determination of Fee-Schedules

2.1.2.1. The Determination of Relative Values

With respect to private patients, the Federal Government issues the Official Fee Schedule (Gebührenordnung Ärzte, GOÄ, von 1965)[1]. It contains some 9oo positions, attaching to each position a DM-value. The physician should not exceed the sixfold thereof, but may if he wishes to. The Official Fee Schedule is, however, only of limited importance, as private patients are only about 7% of all. Yet they account for about 1o-15% of physicians' turn-over.

The official schedule used to be in use for statutory health insurance, too. But over the years, the funds updated the schedule and finally created a new one.

The "Common Fee Schedule" of the Statutory Health Insurance (Gemeinsamer Bewertungsmaßstab für Ärzte) is negotiated at Federal level by the Federal associations of H.I. funds and the Federal Association of H.I. physicians (Kassenärztliche Bundesvereinigung, KBV). For that purpose, the Law has established a special committee (Bewertungsausschuß gem. § 368 i Abs. 8 RVO) with a parity representation of physicians and funds of seven members each. If this committee cannot come to terms, five non-partisan members will be adopted. The standing schedule is valid until a new agreement comes into effect; by law, there can be no period without valid schedule.

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1) reform pending

Table 12: Fees for Home Visits

- Common Fee Schedule of Statutory Health Insurance of 1978 -

5	Besuch einschl. Beratung	250
5a	Besuch im Rahmen einer Früherkennungsmaßnahme bei Kindern nach den Nrn. 75 bis 82 einschl. Beratung	187,5
5b	Besuch an Bord eines Binnenschiffes einschl. Beratung	330
6	Besuch, dringender (werktags dringend angefordert und sofort ausgeführt oder wegen der Beschaffenheit der Krankheit gesondert notwendig) – Uhrzeitangabe erforderlich – einschl. Beratung	330
6a	Besuch aus der Sprechstunde heraus sofort ausgeführt – Uhrzeitangabe erforderlich – einschl. Beratung	450
6b	Besuch an Bord eines Binnenschiffes, dringender (werktags dringend angefordert und sofort ausgeführt oder wegen der Beschaffenheit der Krankheit gesondert notwendig) – Uhrzeitangabe erforderlich – ainschl. Beratung	400
6c	Besuch an Bord eines Binnenschiffes aus der Sprechstunde heraus sofort ausgeführt – Uhrzeitangabe erforderlich – einschl. Beratung	550
7	Besuch bei Nacht, bestellt und ausgeführt zwischen 20 und 22 Uhr bzw. 6 und 8 Uhr – Uhrzeitangabe der Bestellung und Ausführung erforderlich – einschl. Beratung	450
7a	Besuch bei Nacht, bestellt und ausgeführt zwischen 22 und 6 Uhr – Uhrzeitangabe der Bestellung und Ausführung erforderlich – einschl. Beratung	620
7b	Besuch an Bord eines Binnenschiffes bei Nacht, bestellt und ausgeführt zwischen 20 und 22 Uhr oder zwischen 6 und 8 Uhr – Uhrzeitangabe der Bestellung und Ausführung erforderlich – einschl. Beratung	550
7c	Besuch an Bord eines Binnenschiffes bei Nacht, bestellt und ausgeführt zwischen 22 und 6 Uhr – Uhrzeitangabe der Bestellung und Ausführung erforderlich – einschl. Beratung	800
8	Besuch an Sonn- und Feiertagen – einschl. Beratung	370
8a	Besuch an Samstagen ab 12 Uhr – einschl. Beratung	370
8b	Besuch an Bord eines Binnenschiffes an Sonn- und Feiertagen – einschl. Beratung	500

The present schedule contains some 2,300 positions and attaches to each position a certain number of "points" (Punkte). A short consultation, for instance, is worth 71.5 points, a thorough examination 106 points and a routine home visit at day 250 points.

The extreme number of items is due to a very fine differentiation of procedures.

To give an example, tables 12, 12a and 13 show some pages of the present fee schedule. Tables 12, 12a show the positions for home visits (incl. consultations). There are 14 positions. In addition to these fees, the physician can claim an indemnification for travelling costs of 4.00 - 7.00 DM per km of distance and remunerations for other services rendered during the home visit (f.i. thorough examination, injections etc.)

Table 13 shows a selection of lab tests. As can be seen, each parameter of a specified lab test has its own position number, although the value in points are quite often the same.

Table 14 gives the values for a variety of other medical procedures. For purposes of intertemporal comparability, DM-values are presented here; as the value of a "point" stands presently at 0.10 DM the number of points can easily be reconstructed by multiplying with factor 10. From the figures presented, one easily comes to the conclusion that the fees for personal physician services (consultations, home visits etc.) are pretty small as compared to blood tests etc.

Table 12a: Fees for Home Visits

No.	Definition	Points
5	home visit (incl. consultation)	25o
5a	home visit in connection with screening for diseases of children	187,5
5b	visit on board of a vessel	33o
6	urgent home visit	33o
6a	urgent home visit during consultation hours	45o
6b	urgent visit on board of a vessel	4oo
6c	urgent visit, during consultation hours, on board of a vessel	55o
7	home visit, between 2o:oo and 22:oo or 6:oo and 8:oo hours	45o
7a	home visit, between 22:oo and 6:oo	62o
7b/c	same as 7 and 7a, but on board of a vessel	55o 8oo
8	home visit, on sundays or holidays	37o
8a	home visit, on saturday after 12:oo	37o
8b	as 8, but on board of a vessel	5oo

Table 13: Fees for Selected Lab Services

- Common Fee Schedule of Statutory Health Insurance of 1978 -

II. Quantitative physikalisch-chemische Untersuchungsmethoden

Bestimmung eines Körpermaterials unter Verwendung von vorgefertigten Reagenzträgern mittels Reflektionsmessung 65

Katalog

3601	Glukose

Untersuchung eines Körpermaterials mit quantitativer physikalischer oder chemischer Messung, je Analyse 50

Katalog

3621	Albumin
3622	Erythrozytendurchmesser
3623	Gesamteiweiß
3624	Hämatokritwert
3625	Hämoglobin
3626	Titration der Magensäure (je Untersuchungsgang)
3627	Zucker im Harn

Physikalische Untersuchung eines Körpermaterials in einer Verdünnungsreihe, je Untersuchung 90

Katalog

3641	Goldsol
3642	Mastix
3643	Osmotische Erythrozyten-Resistenzbestimmung
3646	Bestimmung der Osmolalität

Quantitative chemische Untersuchung eines Körpermaterials mittels Photometrie, je Analyse 100

Katalog

3661	Glukose im Blut
3662	Glukose im Liquor
3663	GOT
3664	GPT

Quantitative physikalische Untersuchung eines Körpermaterials mit Hilfe der Flammenphotometrie oder ionenselektiver Elektroden, je Untersuchung 100

Katalog

3681	Calcium
3682	Kalium
3683	Lithium
3684	Magnesium
3685	Natrium
3686	Blei

Höchstwert zu den Nrn. 3681 bis 3686 300

Table 14: Charges for selected medical procedures[1)]

- Federal Republic of Germany 1968 and 1980 -

PROCEDURE			CHARGE		
GERMAN NOMENCLATURE		TRANSLATION	1968 (DM)	1981 (DM)	INCREASE
1	Beratung	short consultation, minimal office visit	3.00	7.15	2.38
65	eingehende Untersuchung	thorough physical examination	5.00	10.60	2.12
5	Besuch einschl. Beratung bei Tage	routine brief home visit, at day	6.00	25.00	4.17
15	Brief ärztlichen Inhalts	medical note for another physician	3.00	5.00	1.67
250	Blutentnahme aus d. Vene oder Arterie	taking of blood	3.00	4.00	1.33
253	Injektion, intravenös o. intraarteriell	injection, intravenous or intraarterial	4.00	6.70	1,68
400	Bestimmung d. Blutkörperchen-Senkungsrate (einschl. Entnahme)	sedimentation rate (incl. taking of blood)	5.00	6.50	1.30
92 oder 4851	zytologische Untersuchung (einschl. Entnahme)	PAP-test (incl. taking of material)	9.00	13.00	1.44
651	EKG in Ruhe oder nach Belastung (mind. 9 Ableitungen)	ECG (at least 9 circuits)	17.50	25.30	1.45
652	EKG unter fortschreibender Registrierung	ECG, continous registration (at least 9 circuits)	17.50	44.50	2.54
3625	Hämoglobin	hemoglobin	3.00	5.00	1.67
3711	Cholesterin gesamt	cholesterol	12.00	12.00	1.00
1205	Vollständiger Blutstatus	complete blood count	16.00	20.00	1,25
5135	Übersichtsaufnahme Brustorgane	x-ray chest	22.00	30.00	1.36
157	Magen-Zwölffingerdarm-Kontrastuntersuchung	x-ray stomach	45.00	66.55	1.48

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1) Fee schedule of local health insurance funds (Ortskrankenkassen)

Table 15: Fees Charged for Two Different Routine Visits

Case 1: simple feverish infection

		DM
5	home visit, at day	25.00
65	thorough examination	10.60
14a	sickness leave note	3.05
5	home visit (= revisit)	25.00
		63.65

plus indemnification for travelling costs.

Case 2: complicated feverish infection

		DM
5	home visit, at day	25.00
65	thorough examination	10.60
14a	sickness leave note	3.05
5	home visit (= revisit)	25.00
400	blood sedimentation rate	6.50
3500	simple uric test	3.20
		73.35

plus indemnification for travelling costs.

One should be very cautious, however, in comparing these figures with fee schedules of other countries. Most physician-patient contacts will result in a number of items billed and only this conglomerate of items forms the actual remuneration of a contact. For purposes of demonstration, table 15 shows two simple routine visits and the resulting set of items billed.

The relative values are the result of a complicated bargaining process. Conflicting interests of physicians and funds as well as among specialty groups have to be reconciled. There are only limited data on actual costs per service. The process of negotiations therefore moves on very slowly.

Over the years, two objectives, however, have been achieved to a remarkable extent: the devaluation of lab and other medical technical services (following the decreasing per unit costs of these services) and secondly the revaluation of the basic medical services consultation, examination and home visit (see above). The aims behind were sponsoring basic medical services and decouraging medical technical services, lab services in particular. It is doubtful, however, whether this de- und revaluation of services had a real impact on physician activity. Fees of lab services and other medical-technical services are still well above actual costs and physicians' incomes still come to a large extent from these services (see below).

Two other objectives haven't been achieved so far: the low relative income position of GPs has not been lifted - in spite of the revaluation of those basic medical services, which are in particular typical for GPs. The reason was that the volume

of medical technical services expanded even faster.[1] Secondly, the objective of the funds to decrease the number of items of service and to form larger entities, was also not achieved.

2.1.2.2. The Determination of Absolute Values

The absolute values, i.e. the values of a "point", are negotiated separately from relative values:

The "Concerted Action of the Health Care System" (Konzertierte Aktion im Gesundheitswesen), a product of the 1977 Cost Containment Legislation and consisting of all interest groups in health including funds, government, unions and employers, has to issue annual recommendations on the increase of remunerations (§ 4o5a RVO). Unless the funds and physicians agree, the recommendations are only indicative. Hence, the importance of this national institution is more in its publicity and moral suasion.

If funds and physicians don't agree with these recommendations, they are asked to issue their own recommendations at Federal level. Although the legal quality of these recommendations is not yet quite clear, they clearly are of major importance for the negotiations at State level, if only for the fact that the arbitration boards will take them into account in case they are asked for arbitration.

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1) Without the revaluations, the relative income position of the GPs would have gone further down.

The local health insurance funds, the factory based funds, the handicraft based funds and the farmers' funds then negotiate the effective value of the "point" separately at State level. Their partners are the State H.I. physicians associations (Kassenärztliche Vereinigungen). The substitute funds negotiate at Federal level. In terms of economics, an oligopoly (the funds) is dealing with a monopoly (the physicians).

In case the contractors don't come to terms, the State Arbitration Office (literally) or rather Board (Landesschiedsamt) has to take up the case. These "offices" or rather boards consist of five non-partisan members and of seven representatives of the funds and of the physicians. Rulings of the board are binding and can only be challenged before the social courts.

Until new agreements or rulings, the standing value of the "point" stays valid; thus, by law, there can be no period of time without a valid value.

2.2. Financing of Ambulatory Physician Services

With respect to private patients (7% of total population), physicians bill consumers either directly or via a commercial agent (privatärztliche Verrechnungsstelle). If covered by voluntary private health insurance, consumers forward the bill to the insurance company for reimbursement. In addition, civil servants also get a reimbursement of 5o-7o% from their employer. Thus, the actual cost sharing of patients depends on

the type of insurance coverage and the type of occupation. The tendency is, however, towards an out-of-pocket coverage of all medical expenses up to an individually selected maximum amount per year and an 1oo%-reimbursement of all costs exceeding that amount. Representative data on the actual amount of cost-sharing are not available.

Physician services for patients under statutory health insurance are delivered in kind (with no cost-sharing whatsoever). The patient is required to present the physician a voucher ("Krankenschein") of his fund, on the back of which the physician is required to put down diagnoses and services rendered. In case of a referral, a new voucher is issued by the refering physician ("Überweisungsschein"). These vouchers are then processed by the H.I. physician associations, monitored (s. below), and forwarded to the funds. In turn, remunerations flow via physician associations to the doctors.

2.3. Monitoring System

Under statutory health insurance, for each physician a claims sheet is produced, listing the number of cases, the frequencies of the various items of service rendered and the average utilization per case[2], both absolute and compared to his speciality group.

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2) cases = number of patients of a physician treated during a quarter of a year.

The claims sheets vary somewhat from region to region and are, of course, of different length (sometimes several sheets). Table 16 shows the upper part of the first sheet and the lower part of the last sheet.

If there are obvious deviations from the group, a physician will be brought before the economic monitoring committee (Wirtschaftlichkeitsprüfungsausschuß) and a thorough review of his performance on the basis of the voucher informations will occur. In case of inefficient performance his claims will be cut. About o.5 - 1.5 per cent of all claims are being cut, on average. There is also a review for medication and medicinal aids.

The committees are staffed by an equal number of representatives of the funds and of the physicians. The alternating chairman exercises the casting vote.

The patient neither knows the items charged nor the amount of money paid; he, therefore, doesn't exercise any control of the billing.

The drawbacks of the present economic monitoring system are quite evident:

- There is no control of whether the items billed actually have been delivered.
- The screening system catches only physicians with high utilization rates per case. But inefficient practice just as well may lead to long periods of treatment and frequent referrals or hospital admissions.

- The thorough review is based upon the diagnoses as stated by the physician on the voucher,quite often not a very distinct and valid information.

Better systems,however, are difficult to implement.

2.4. Incentives and Decentives of the System

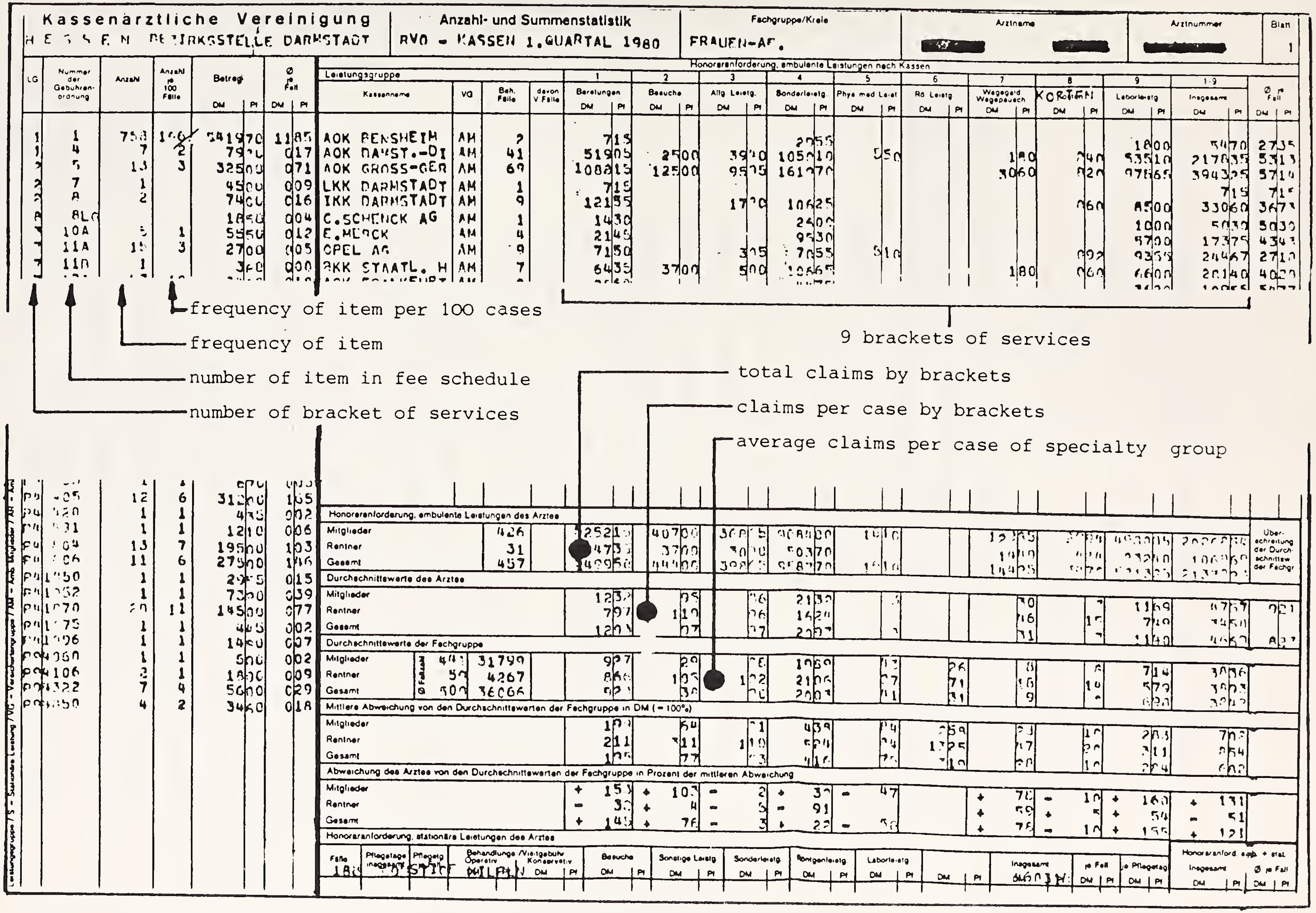
The economic incentives and decentives inherent in the present system of remunerations are widely discussed; controlled studies of the effects of our fee-for-service system as compared to other systems, however, have never been tried.

Secondly, it is important to note that physician behaviour is not only influenced by economic tools (as the system of remunerations), but also by numerous non-monetary factors such as traditions and training, advance of medical technology, formal and informal regulations and standards, professional ethics and dedication, number of providers and so on. The relative importance of the economic factors in this context is not clear.

With all other factors equal, and on the assumption that a physician, too, strives for a high income and a reasonable work load, economic theory comes to the conclusion that a fee-for-service system of remuneration tends to induce

- a high level of services (and a high level of equipments and staffing to facilitate that), even if not all services are necessary on medical grounds

table 16: Claims Sheet for Economic Monitoring



Kassenärztliche Vereinigung
HESSEN BEZIRKSSTELLE DARMSTADT

Anzahl- und Summenstatistik
RVO - KASSEN 1.QUARTAL 1980

Fachgruppe/Kreis: FRAUEN-AE.

Arztname: [redacted] [redacted]

Arztnummer: [redacted]

Blatt: 1

Honoraranforderung, ambulente Leistungen nach Kassen

Honoraranforderung, ambulente Leistungen des Arztes

Durchschnittswerte des Arztes

Durchschnittswerte der Fachgruppe

Mittlere Abweichung von den Durchschnittswerten der Fachgruppe in DM (= 100%)

Abweichung des Arztes von den Durchschnittswerten der Fachgruppe in Prozent der mittleren Abweichung

Honoraranforderung, stationäre Leistungen des Arztes

frequency of item per 100 cases

frequency of item

number of item in fee schedule

number of bracket of services

9 brackets of services

total claims by brackets

claims per case by brackets

average claims per case of specialty group

- an emphasis on services with the highest fee/costs-ratio,
- a minimization of time and real input per item of service,
- no consideration of external costs of practice.

Most of the presently discussed problems of ambulatory care could be explained by these four theoretical effects of the fee-for-service system, for instance:

- continuous strong expansion of volume of services, with medical effects doubtful
- increases of physicians leading to an increase of volume of services per population rather than a decrease of volume per physician
- heaviest expansion in the field of medical-technical services
- deficiencies in the field of GP-services (in particular in the field of psychic and psychosomatic diseases)
- referral of difficult, time consuming cases to specialists or to hospitals
- no or little consideration of prices or costs of prescriptions, referrals, sickness certificates etc.

It is not clear, however, whether all these undesirable effects are indeed due to the fee-for-service system nor what positive or adverse effects other systems would have. Salaried hospital physicians for instance, too,are known to expand medical-technical services and medication verv rapidly and to neglect psychic and psychosomatic problems. It seems safe to state, however, that the system at least doesn't contribute to solve these problems and that additional measures are necessary and in part have been taken.

A more thorough analysis of the pro's and con's of the fee-for-service system is presented under chapter 4.

LEVEL AND STRUCTURE OF PHYSICIAN ACTIVITY

UNDER THE FEE-FOR-SERVICE-SYSTEM

3. Level and Structure of Physician Activity under the Fee-For-Service-System

3.1. Changes in the System and their Effects on Physician Activities

In the last decades there have been no major changes of the system but smaller ones within. Measurable effects have not been reported:

a) Up to the mid-sixties the funds paid capitations to the the physicians' associations which in turn distributed the pool according to a fee schedule. Since then, the funds pay fees for services. As the individual physician was not directly affected by this change of system, no change of physician activity was to be expected (The larger influence of funds on the economic monitoring since then was offset by the decreasing interest of physicians in decouraging over-utilization by some of their colleagues).

b) Successive devaluations of fees for medical-technical services and revaluations of fees for personal physician services failed to check the trend towards the first so far.

c) The collective caps on utilization per capita or per case failed to have an influence on the individual physician behaviour.

d) The trial linkage of fee-increases to cost expansion in other physician influenced areas (medication,

Table 16a:

Physician Activities, by Selected Types of Services[1]

- 1966 - 1976 -

Year[3]	Volume per H.I. Member[2]	thereof ......[2]				
		Consulations	Home Visits	Special Procedures incl. Lab	x-ray	Price - Index[4]
1	2	3	4	5	6	7
1966	129.98	40.25	17.18	46.30	12.27	96.5
1968	141.13	42.68	16.77	53.33	13.37	100.2
1970	155.65	42.45	14.71	67.41	16.72	109.5
1972	173.40	43.59	12.84	80.58	20.15	129.4
1974	194.52	45.42	12.15	96.45	23.36	146.3
1976	218.17	46.50	11.47	114.73	27.37	154.7
1966/67	+ 68.4 p. c.	+ 15.5 p. c.	- 32.2 p. c.	+ 147.8 p. c.	+ 123.1 p. c.	+ 60.3
per year	+ 5.3 p. c.	+ 1.5 p. c.	- 3.9 p. c.	+ 9.5 p. c.	+ 8.4 p. c.	+ 4.8

[1] data for so-called RVO-Krankenkassen only.

[2] at constant prices (prices of GOÄ, basic values, of 1965)

[3] Switch from GOÄ to BMÄ (1971) and major revision of BMÄ (1976): all figures are adjusted

[4] prices of GOÄ, basic values, of 1965 = 100.

hospital admissions etc.) at an collective level so far has not shown clear effects on individual physician behaviour either, although the observation period is too short yet for a final judgement. (The idea was and is to give an economic incentive to consider external costs.)

e) Throughout the evolution of today's fee-for-service-system there have been some flanking measures to offset unwanted effects of a pure fee-for-service system. These measures are described in chapter 4. The effects, however, are difficult to evaluate.

Inspite of all these steps, the basic trends of physician activity are unchanged: Strong expansion of medical-technical services and medication, underservice of psychic and psychosomatic health problems, lack of personal concern and influence on health behaviour, decreasing numbers of home visits. F.i. total real volume of physician activity under fee-for-service increased by 5.3% per year in 1966 through 1976, home visits decreased by 3.9%, consultations increased by 1.5%, X-ray by 8.4% and lab and other special procedures by 9.5% per year (table 16a).

3.2. Equipment and Staff of Office-based Physicians

Although very little reliable data are on hand, it is safe to say that both office staff and equipment has been increased continuously over the decades, facilitating the strong expansion of medical-technical services. Only in recent years, these seems to be a stop of expansion.

Table 17 :

Average Staff of Office-based Physicians, per office

- Federal Republic of Germany, different sources -

type	1975 2)			1976 3)			1979 2)		
	GP's	Sp 1)	All	GP's	Sp 1)	All	GP's	Sp 1)	All
owning physicians	1.00	1.07	1.04	1.0	1.07	1.03	1.00	1.18	1.11
family members (without salary)	0.31	.20	.25				0.21	0.10	0.14
technical assistants	0.12	.26	.20				0.10	0.22	0.18
doctor's assistants	1.66	2.19	1.95				1.76	2.41	2.16
doctor's assistants in training	.63	.84	.74				0.53	0.80	0.69
all other (f.i. physiotherapy, cleaning, etc.)	1.03	1.25	1.14				0.84	0.96	0.91
total	4.73	5.73	5.28	3.7	4.9	4.4	4.38	5.72	5.21

1) including group practice (GP and specialist)

Sources:

2) 1975/1979: own computations from data material of the Ferderal Bureau of Statistics (Kostenstrukturerhebungen)

3) 1976: Own Computations from data material of the Zentralinstitut of the Fed.Ass. of H.I. physicians (Kostenstrukturanalyse)

The differences are probably due to different weighting of part time staff.

Table 18 :

Equipment of Office-based Physicians

- Federal Republic of Germany, different areas, years and sources -

1. Lower Saxony, 1978:

	Total	x-ray facilities
GP's	3,129	564 (= 18 %)
Specialists (excluding radiologists)	3,412	1,475 (= 43 %)
Radiologists	134	

2. Lower Saxony, 1977:

all office-based GP's:	
- participating in lab cooperatives	19 %
- sharing lab and other equipments	3 %
- sharing equipments (except lab)	5 %
- not participating	73 %
own lab facilities	100 %
- small	50 %
- medium	45 %
- full scale	5 %
own x-ray facilities (diagnostic)	16 %

3. Lower Saxony, 1972:

	Total (in sample)
GP's	2,105
thereof with	
ECG	46 %
x-ray	24 %
lab-facilities	98 %
small	10 %
medium	80 %
full scale	8 %

4. Nord-Württemberg, 1974/77:

		Total	x-ray
GP's	74:	1,418	204 (= 14,4 %)
	77:	1,428	193 (= 13,5 %)
Specialists (excluding radiologists)	74:	1,685	736 (= 43,7 %)
	77:	1,891	802 (= 42 %)
Radiologists	74:	83	
	77:	96	

5. Nord-Württemberg, 1976:

	GP's	Specialists	All
total	1,413	1,907	3,320
thereof with			
EKG	49 %	29 %	38 %
EEG	0 %	3 %	2 %
lab	.	.	.
- large	75 %	51 %	61 %
x-ray (diagnostic)	10 %	39 %	27 %

Sources:

[1] KV Niedersachsen: Kassenärztliche Versorgung in Niedersachsen - Strukturanalyse 1978, Hannover 1979

[2] Reichertz, P.L. u.a.: Struktur und Funktion der allgemeinmedizinischen Praxis, Studie in Nieder-

The average number of staff personnel per year is 3.4 to 4.3, according to different sources; the bulk of these are "doctor's assistants" (Arzthelferinnen), i.e. personnel with a two years' training in physician offices and limited schooling, handling routine organization and administration, routine lab and physiotherapy duties, dressings and injections, and generally assisting the physician in all his activities (see table 17).

Depending on the type and scope of practice, staff personnel varies very much. In large specialist or GP-offices there are up to ten staff members. With respect to equipment, today virtually every physician has lab facilities at his disposal, either in his office or in a lab cooperative with automated facilities, or both (see table 18).

Lab cooperatives of office-based physicians spread very rapidly when automated facilities came on the market. It is estimated that today about one third of office-based physicians participate in such cooperatives. Lab tests performed by these cooperatives are charged by the ordering physician, thus increasing his personal income. With these comprehensive and cheap services at hand, lab utilization by physicians increases markedly.

X-ray facilities are at the disposal of about 15 to 2o% of GPs and virtually all internists and orthopaedists, ECG's at the disposal of about half the GP's and virtually all internists (see table 18).

If a physician lacks a diagnostic of therapeutic equipment, he is free to refer the patient to an office-based specialist for that very service (or if necessary to the hospital), f.i. to a specialists of radiology or lab medicine.

Cooperatives of medical-technical services other than lab (Apparategemeinschaften) are not very frequent but slowly spreading, too.

3.3. Level and Structure of Physician Activity

There are comprehensive, very detailed statistics on the utilization of every single one of the approx. 2,3oo of services of the fee schedule. Yet, it is difficult to compute more comprehensive utilization data (as f.i. number of physician contacts, total or disaggregated into comprehensive contacts and mere routine recalls or prescription renewals; number of diseases treated etc.) as the most frequent items (consultation, examination, home visits etc) cover everything from a short dialog, inspection or mere routine prescription renewal to a thorough conversation or physical examination of some length, and a physician contact can result in many different fee clusters.

The nevertheles presentable data from various sources is compiled in tables 19f. From this the following conclusions can be drawn:

On average, the population contacts ambulatory physician services 11-12 times per capita and year. The

Table 19a

Selected Physician Activities in Ambulatory Curative Health Care

- Federal Republic of Germany, 1980 -

Physician Activity			Frequency of Activity[1]	
Fee-Schedule[4]	Nomenclature	Relative value[2]	per Capita	per Physician
1-4a	consultation	71.5(-142)	8.95	9.021
5-8b	home visit	250(-800)	0.89	900
4b	hospital visit	50	0.21	207
65, 65a	thorough physical examination	106(126.5)	2.43	2.451
plus 800,801, 807,816	ditto, plus neurolog. and psychiatric examination	(-500)	2.53	2.554
14a	certification of unfitness to work	30.5	0.74 (2.06)[3]	746
	injections			
252	- intramuscular etc.	41	1.03	1.036
253	- intravenous etc.	67	0.34	347
254	- intraneural etc.	91 !	0.07	73
252-256	total	41(-181.5)	1.45	1.461
500,501	inhalation therapy	38(-85.5)	0.14	139
548-551	electro therapy	37(-55)	1.11	1.115
650-652	ECG	253(151.5-445)	0.21	210
70	colposcopy	72.5	0.13 (0.25)[3]	131
1075	vaginal treatment	44.5	0.16 (0.32)[3]	166
1200-1202	eye refraction	59(-89)	0.41	418
1255-1257	tonometry	100(70-242)	0.18	177
5010-5030	x-ray of extremities	325(118.5-414)	0.15	150
5135-5151	x-ray of chest organs	300(94.5-739)	0.12	121
5155-5160	x-ray of stomach and duodenum	665.5(414-961)	0.04	38
5343-5345	CT-scanning	2500(-4000)	0.002	2.4

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[1] Utilization statistics of statutory health insurance (without substitute funds), projected for total population.

[2] If there are subtypes of activity, relative value ("points") of most frequent activity; range of values in brackets. 1980: 1 Point = 0,1 DM.

[3] Per employee and per female, respectively.

[4] Position-numbers of H.I.-Fee Schedule (BMÄ).

Table 19b

Selected Laboratory Services in Ambulatory Curative Health Care

- Federal Republic of Germany, 1980 -

Type of Service			Utilization 1980[1]	
Fee-Schedule[4]	Nomenclature	Relative Value[2]	per Capita	per Physicia
250,400	blood collecting	40	0.65	655
400	blood sedimentation rate	65	0.46	463
3500-3505	simple physicochemical test with prefabricated reagents	32(-42)	0.43	432
3601,3661,3662, 3627	glucose	(50-)100	0.49	491
4051-4068,4060	microscopic exam. of body material, using a dye if necessary	50(-60)	0.63	637
	thereof:			
4055	urine sediment	50	0.47	474
4142,4143,4200-4205	counting of white and red blood corpuscles	55(50-200)!	0.42	423
3715	uric acid	120	0.18	186
3735	gamma- GT	120	0.18	183
3711	cholesterol	120	0.18	177
3625	haemaglobin	50	0.15	148
3663	GOT	100	0.14	145
3664	GPT	100	0.17	174
3720	triglyceride	120	0.15	147
3717	creatinine	120	0.14	138
3602,3714	urea	100-120	0.05	54
3682,3691	potassium	100	0.08	78
3703	iron	120	0.05	54
4600	simple bacterial prove using prefabricated culture medium	40	0.06	58

[1] Utilization statistics of statutory health insurance (without substitute funds), projected for total population.

[2] If there are subtypes of activity, relative value ("points") of most frequent activity; range of values in brackets. 1980: 1 Point = 0,1 DM.

[3] Per employee and per female, respectively.

[4] Position-numbers of H.I.-Fee Schedule (BMÄ).

type of service	utilization per capita			utilization per physician		
	GP's	Specialists	All	GP's	Specialists	All
1. physician services (Rheinland 1979)						
- home visits	.65	.17	.82	1,990	260	850
- thorough physical and psychiatric examinations in offices (closest approximation to comprehensive office visits)	.71	2.14	2.84	2.161	3,330	2,940
- all visits (office and home) of comprehensive nature	1.36	2.31	3.66	4,150	3,590	3,780
- injections	.89	.89	1.78	2,740	1,390	1,840
- intramuscular etc.	.62	.61	1.23	1,915	950	1,275
- intravenous etc.	.26	.19	.45	780	300	460
- intranervous etc.	.02	.09	.11	45	140	105
- blood sedimentation rate	.25	.32	.56	765	490	580
- ECG (all applications)	.09	.16	.25	260	245	250
- Laboratory/quantitative analysis						
- glucose	.30	.25	.55	930	390	570
- haemoglobin	.06	.08	.13	175	115	135
- trigly ceride	.09	.10	.19	280	145	195
- urine sediment	.17	.32	.49	520	500	510
2. physician services (Ingolstadt 1975)						
- total number of patient contacts with delivery system of amb.med. care (of all curative types)	7.50	3.20	11.00			
- home visits	.75	.04	.80			
- population with physician contact	m: 71 %	71 %	84 %			
	f: 79 %	83 %	91 %			
2a. physician services (Munich, Oct. - Dec. 1978)						
- percentage of population contacting a GP/specialist within three monthes	55.3 %	51.7 %	70.3 %			
- percentage of population with no physician contact within three monthes	44.7 %	48.3 %	29.7 %			
- contacts within three monthes per population (per patient)	1.7 (3.0)	1.6 (3.0)	3.3			
3. physician performance (Verden, 1975)						
- patients seen per day				98		
- thereof new disease				24		
- thereof in office				87		
- time spent per patient (without mere routine renewals of prescriptions)				4,0 min.		
- referrals (specialist or hospital) as p.c. of contacts				5,6 %		
4. prescriptions (FRG, 1979)						
- drugs prescribed (incl. renewals)	(11.0)	(3.5)	(14.5)	(24,000)	(7,000)	(15,000)
5. hospitalizations (FRG, 1979)						
hospital admissions			.178			180.4
- acute			.155			157.6
- long stay			.023			22.8
hospital days			3.575			
- acute			2.367			
- long stay			1.209			
length of stay			20.1			
- acute			15.2			
- long stay			53.7			

Souces: 1) KV Nordrhein, Frequenzstatistik 1979 (EDV-Output); own computations and estimates
2) LdO-Bayern: Datenbankprojekt; unveröffentlichte Auswertungen des WIdO; estimates
2a) Neubauer, G., u.a. (Hrsg.): Medizinische Versorgungssituation in München - Ergebnisse einer Bevölkerungsbefragung, Hochschule der Bundeswehr Forschungsbericht Nr. 3, München 1981
3) Moehr, J.R., und Haehn, K.D.: Verdenstudie, ZI-Schriftenreihe Band VII, Köln 1977, own calculations and estimates
4) WIdO-Estimates
5) [illegible]

Table 19d:

Total Drug Consumption

in quantities (number of packages) and values at wholesaler purchase prices, broken down by main therapeutical classes

Federal Republic of Germany, 1980

	GERMANY	
	packs 10^3	DM 10^6
Alimentary tract and metabolism	226,1	1.681,6
Blood and blood forming organs	16,2	188,6
Cardiovascular system	213,9	2.454,3
Dermatologicals	110,9	569,3
Genito-Urinary system and sex hormones	55,5	505,7
Systemic Hormonal preparations excluding sex hormones	13,0	123,2
General anti-infectives systemic	35,9	414,1
Musculo-skeketal system	87,1	663,5
Central nervous system	225,1	1.095,9
Parasitology	2,1	9,0
Respiratory system	208,3	836,8
Sensory organs	34,8	102,2
Various	38,3	285,0
Total	1.267,2	8.929,2

Table 19e:

Unfitness to work

- number of cases, average duration and number of days per employee -

Federal Republic of Germany, 1978

	male	female	total
- number of cases per employee	1.189	1.054	1.117
- number of days per employee	20.43	18.43	19.32
- average duration per case	17.2	17.5	17.3
- average daily unfitness to work (in % of total employees)	5.9 %	5.3 %	5.7 %

definitions: unfitness to work: sickness-related unfitness from first day to 1.5 years (beyond: "invalidity"). Certified by an office-based physician. Employee: all compulsorily insured blue- and white collar employees.

Sources: Federal Department of Labor and Social Affairs: Hauptergebnisse der Arbeits- und Sozialstatistik 1980, p. 137 and 143.

bulk of these contacts, however, are minor ones as f.i. routine follow-up inspections, renewals of prescriptions, treatments of physiotherapy, during which the patient sometimes doesn't even see the physician. The number of home visits is o.9 per capita.

Throughout one year, about 85% of the male population and 9o% of the female population see at least one physician.

The numbers of medical-technical procedures and medications administered to the patient during these contacts are quite remarkable: On average, every German receives 1.5 injections per year, o.21 ECG-applications, o.6 blood sedimentation rate determinations and o.5 urine sediment analyses.

In order to handle that load, the GP and specialist sees 8o-12o patients a day. When mere prescription renewals excluded, GPs spend 4 minutes per patient on average. Most of these contacts are of minor nature, in fact 5o% of all contacts recorded by a GP sample of Verden in 1975 were shorter than 1.7 minutes. The high percentage of routine follow-up contacts is also illustrated by the fact that only a quarter of the patients seen report new ailments.

The number of home visits is quite remarkable too: almost 8 per work day by GPs (specialists do only few home visits).

Table 20:

Income Position of Physicians and Dentists under Fee-for-Service

- DM -

	1959	1963	1967	1971	1975	(1978)	1979
turn over							
all office-based physicians	55,484	77,666	120,889	173,154	260,284	315,047	(332,690)
GP's	53,217	69,759	105,222	151,871	226,607	269,342	.
Dentists	.	(67,000)	126,953	193,914	370,638	.	564,113
gross income							
all office-based physicians	35,288	49,756	80,149	113,543	149,247	166,459	(176,227)
GP's	34,964	46,948	72,603	102,958	135,123	154,000	.
Internal Medicine	.	55,763	91,889	136,322	180,953	.	.
Gynaecology	.	.	86,107	112,659	160,078	176,000 1)	.
Paediatry	.	40,933	63,689	90,704	116,356	.	.
Dentists	.	(36,000)	76,934	113,940	180,912	.	227,879
gross income							
all employees	6,460	8,940	11,704	18,216	27,279	33,078	34,889
ratio (all physicians/ dentists to all employees)	5.46	5.57	6.85	6.23	5.47	5.03	5.05
	.	(4.0)	6.6	6.3	6.6	.	6.5

Source: Own calculations from data material of the Federal Office of Statistics (Kostenstrukturerhebunge
physicians 1978/79: own calculations from data material of: Zentralinstitut für die kassenärztli
Versorgung der KBV, Köln (Kostenstrukturerhebung)

1) all specialists

The number of drugs prescribed is estimated to be 14.5 per capita and year[1],the number of hospitalizations is o.178 causing 3.6 hospital days (for details see tables 6 and 19). Per physician, the number of drugs prescribed is 15,ooo per year. Most of this medication comes from the GP: He prescribes 24,ooo drugs per year, i.e. more than 1oo per work day. As there are on average approx. 2 items on each prescription, the GP issues about 5o prescriptions per work day! This figure varies from GP to GP very much and there are GPs reported to issue up to 2oo prescriptions per work day.

The number of certificates of unfitness to work issued by office based physicians is 2.o6 per employee and year, the number of cases is approx. one, hence there are approx. 2 certificates per case on average.

The data on physician activity presented above comes from various regions with varying physician density and,in particular,with varying GP/specialist-ratios. Therefore, the data break-down for GPs and specialists produces notable differences. In Ingolstadt GPs account for more than 6o% of the physician population; hence physician contacts and home visits are heavily concentrated on them. In Rhineland and Munich, on the other hand, approx. 2/3 are specialists; therefore, there a larger share of the services is delivered by specialists. The larger the number of specialists, the more they penetrate into traditional GP realms. They then even take a larger share of home visits!

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1) items of medication, in Germany generally identical with no. of packages. The large numbers are, in part, due to a high rate of renewals. The cited figure pertains to ambulatory care only. Total drug consumption (including hospitals and selfmedication) was approx.

3.4. Economic Aspects of Physician Activity

The turn-over and gross income of physicians is presented in table 2o. The relative decline in their income position is primarily due to three factors: 1) increase of number of physicians, 2) cost containment measures and 3) practice costs consuming an expanding share of turn-overs.

In consequence, dentists have passed physicians in the seventies and have now a gross income of DM 228,ooo per year (1979).

The sources of physician turn-over are the following (estimates from various sources of 1975/1979):

- health insurance	85%
- private health insurance, out of pocket and other sources	15%
	1oo%

thereof:

- consultations, examinations, treatments	56%
- fees for home visits (excluding fees for procedures performed)	12%
- lab	16%
- X-ray	13%
- physiotherapy	4%

NATIONAL POINTS OF VIEW ON THE PHYSICIAN COMPENSATION SYSTEM

4. National Points of View on the Physician Compensation System

4.1. Points of View of Interest Groups and Parties

The points of view on the physician compensation system are not always to be discerned clearly, in part because they are not stated formally, in part because short , medium and long term objectives differ, and in part because interest groups and parties are split in themselves. But it seems safe to state the following basic tendencies:

1. Parties

SPD: fee-for-service, but with a series of amendments: cap on total remunerations, decrease of number of items, more emphasis on primary health care services and less on medical-technical services (which should be no (major) source of income anymore), encouragement of group practice; optional also facilities staffed with salaried physicians. Uniform Fee Schedule. In favor of hospital out-patient departments and equipment pooling. Cost sharing: no, but with dissenting voices.

CDU/CSU:

fee-for-service, but with a series of amendments: more emphasis on primary health care services, incentives for practice in underdoctored areas, decentives for over-utilization etc.

Cost sharing: right wing: yes, left wing: no

F.D.P. (Liberals):

fee-for-service, with amendments close to CDU; seperate fee schedules

Cost sharing: as CDU

2. Health Interest Groups

Funds:

fee-for-service, but with a series of amendments; proposals differing between funds. Local Health Insurance favor devaluation of medical-technical services and revaluation of primary GP-functions, more liberal participation of other facilities in ambulatory care, caps on utilization and generally more influence on pricing and utilization, uniform fee schedule.

Cost sharing: no position

Private Health Insurance:

fee-for-service, cost sharing, but less freedom for physician to determine prices (smaller margins of official fee schedule).

Physicians:

fee-for-service, higher fees of personal physician services (in particular favored by GPs) and surgery. Against stronger hospital participation.

Cost sharing: split, majority in favor

Employers:

fee-for-service, cost sharing

Employees (Unions):

transition of the fee-for-service system into a system of "fee-for-comprehensive physician services" (Leistungskomplexhonorar) with indemnification for medical-technical services. Short run: as SPD

Basic alternatives to the present system of independent physicians payed by fee-for-service are rarely

offered: left wingers of the SPD or even left of it are likely to favor a more socialized system with out-patient departments or clinics staffed with salaried personnel. An outright capitation system is seldomly discussed because it seems hardly to fit into the present system of GPs and specialists in single handed office-based practice and free choice of providers by patients. It could only become feasible if multidisciplinary group practices would emerge (similar to the prepaid idea).

4.2. An Expert's Point of View

The fee-for-service system of remuneration is generally considered as the (traditional) "market approach" of ambulatory health care provision. It's justification rests on three assumptions:

- adequate system of remuneration for "independent professions" (ideological justification)
- inducement to best care (qualitiy and efficiency)
- just reward (distributive justice)

All three assumptions can be challenged:

1) The majority of physicians is by now salaried in Germany, so why should there be an exception just in ambulatory care? In other Western countries ambulatory medical care is quite often not rendered on a fee-for-service-basis.

2) Best care (in terms of quality and efficiency) under fee-for-service can only be expected if

indeed there is a workable market mechanism. Prerequisites of such a situation are on the demand side:

- ability to judge and to select deliberately among a variety of options
- real and financial interest in the decisions

Quite clearly, the patient generally doesn't fullfil these two prerequisites. Even with a (limited) financial interest (in terms of cost sharing), the other prerequisite is still generally missing. The funds do have a financial interest in the decisions taken, but have only a limited influence. Besides, fees are not decided at the market, but by collective bargaining. The fee-for-service system is therefore unlikely to produce best care in terms of quality and efficiency. Is is not surprising, therefore, that a number of deficiencies of the system have been observed or are at least believed to exist (s. table 21).

3) The alleged distributive justice can also be challenged on the ground that services (inputs) and not successfull treatment (outputs) are being rewarded: The more efficient a treatment, the smaller the remuneration! External costs like medication are not taken into account at all. GPs who devote much time on their patients, who do not rely on medication heavily and have few recalls probably practice best medicine but earn least. Probably there is no correlation between quality and efficiency of care rendered and financial reward at all. Secondly, fees for services are determined at collective level thus rather reflecting the political influence of the various speciality group than the medical value of the services. The traditional low value of basic

physician services (resulting in low GP-incomes) is an illuminating example.

On the other hand, no other pricing or utilization mechanism can be considered ideal, either. The German fee-for-service-system of payment has a long tradition. All parties involved realize that this system has, as any system, a number of draw-backs. The common aim is, to develop the system further in order to minimize the draw-backs and to maximize the advantages (see proposals in table 21). Of course, what in particular is considered a draw-back and an advantage differs with the point of view of the observer. But, as shown, only very few groups favor a complete change of the system.Modern societies seldom have - except for catastrophic situations - the option between systems, but are deemed to live with their traditions and make the best of it.

Table 21: Fee-for-Service-System: Deficiencies and Cures

oberserved or maintained deficiency	cures	
	implemented	proposals in discussion (selection)
- tendency towards over-utilization and over-investment/overstaffing	- economic monitoring - caps on total of remunerations or on utilization - "Heckenschnitt", deductions on fees for heavy utilizing physicians (until mid-60ies)	- cost sharing - less items in fee-schedule, Leistungskomplexhonorar, capitation or salary - control of number of physicians - not fees but indemnifications for technical services; central medical-technical centers
- tendency to "technical medicine"	- changes of fee-schedules	- further changes of fee-schedules, Leistungskomplexhonorar etc. - group practice, health centers - encouragement of GP-training
- no consideration of external costs like costs of medication, referrals, hospitalizations, etc. (excessive medication, no workable price competition for drugs, many referrals and hospitalizations)	- economic monitoring of prescriptions - linkage of fee increases to cost developments in other areas, at least at an collective level - information of physicians on external costs induced, on prices of drugs etc.	- comprehensive payments to physicians or groups for total care (probably with limited risk; prepaid or HMO-system)
- uneven regional distribution of physicians (because high density not necessarily means low incomes but rather higher utilization per patient)	- planning system, financial incentives for practice in underdoctored areas, regional restrictions as last ressort	- mark ups on fees in underdoctored areas - stronger restrictions, capitation - out patient services of hospitals
- increase of physicians induces higher utilization	- caps on utilization	- control of number of physicians
- tendency to minimization of time and real input per item of service	- time indications in fee schedule - quality control of lab and X-ray	
- referral of "difficult cases" or fast hospitalization	- mark ups for ambulant surgery	- economic monitoring also of volume of referrals and hospitalizations
- no interest in medical record linkage between offices and between offices and hospitals, little cooperation		- central data systems
- financial disadvantages for physicians with good practice but low utilization		- prepaid- or HMO-system

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